

## UMDC M-Journal

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### EXECUTIVE SUMMARY

This study aims to develop and implement a system that can help the students and faculty search journals easily that would help them for research purposes and reference. The system is online research that can be accessed using the web and through a mobile application. The "UMDC M-Journal" is a study that focuses on catering to the UMDCOffice's need about its manually operated journal. The proposed system can make the student research available online and in a mobile application while providing an area for the students to view researchers for their research purposes. The students will access the website, download the mobile application, view the student research they need for their study most promptly and innovatively. The research and publication office coordinator will be the admin and the one in charge of monitoring the system.

**Keywords:** *Search, Online Research, Journal, Mobile Journal*



## INTRODUCTION

An electronic journal is a periodical publication that is published in electronic format, usually on the Internet. Electronic journals have several advantages: searching the contents pages and/or the full text of journals to find articles on a certain subject. You can read journal articles on your desktop, and the article you want to read will always be available, even when the Library is closed. (SOAS Library)

An online journal is a web-based service exclusively offered to journals technical bulletins published by various organizations affiliated with the university. It aims to serve as the journals' repository, enabling wider dissemination and visibility online of these journals; and to provide journal editors with a convenient way of implementing the editorial process. Depending on the journals' orientation, articles and review papers may be either full open access or limited. Text or PDF article abstracts may be provided, or the full article's excerpts may also be available depending on the journal's access policy. (UPLB Journals Online, 2013)

Similarly, a Mobile journal is a compilation of digital resources such as student research and journals. A mobile journal helps the students have easy access in searching journals and can provide a downloadable file instead of borrowing the books from the research and publication office. The mobile journal will alleviate the hassle of the research and publication office in compiling the journals manually.

## PROJECT CONTEXT

The "UMDC M-Journal" is a study focus to cater to the UMDCOffice's need about its manually operated journal. The proposed system can make the student research available online and through the mobile application while providing an area for the students to view researchers for research purposes. The students will access the website, download the mobile application, view the student research they need for their study most promptly and innovatively. The research and publication office coordinator will be the admin and the one in charge of monitoring the system.

## PURPOSE AND DESCRIPTION

This study is proposed to develop a better scheme for compiling the student researches in the university. This will promote a faster, more convenient, and

more accessible interface that would improve the said undertakings' processes. Both students, the research and publication office, are expected to benefit from this system. The researchers are determined to realize the proposed system to ease the burden of a manual system in compiling journals to alleviate the hassles experienced by the students coming to and from borrowing the research books which cannot be brought outside.

The proposed system allows authorized members to access the research journals. The created system will be able to search and download journals for research and academic purposes. The admin in the research office will add, edit and delete files in the system.

### **OBJECTIVE OF THE STUDY**

This study's main objective is to create a system that will provide the students, faculty members, and guests easy access in searching the research articles produced by the different departments of UMDC.

Specifically, this study intends to achieve the following objectives:

- To provide a convenient way of compiling and storing the journal.
- To allow the students and teachers of UMDC to download the files for future research and reference.
- To allow the user to receive notifications for newly uploaded files.
- To allow the students, faculty, members, and guests to improve the system by leaving comments in the comment box.

### **TECHNICAL BACKGROUND**

The UMDC Mobile journal is a compilation of digital resources produced by the different departments of UMDC. It is capable of making student researches available on the web and in a mobile application. The students, teachers, and members can use the system for research purposes.

In the previous manual process, the Research and Publication Center staff perform their tasks based on their traditional manual process. They usually gather the hard and soft copies of research articles produced by the students and different UM Digos College departments.

The Research and Publication Center encountered certain problems, such as the struggle in compiling the journals manually. Besides, the students have limited time accessing the research articles, for they cannot be brought outside the library.

The researchers decided to create a web and mobile application system to eliminate certain problems experienced by the Research and Publication Center. The said system will provide the students and teachers of UM Digos College a mobile journal and downloadable application that can help them search and download research articles. The researchers are determined in realizing the proposed system, to lessen the burden of the manual system in compiling journals, and to alleviate the problem experienced by the students coming to the library borrowing research journals, thesis research, and case studies that are not allowed to bring outside because of the library policy.

The proposed system will be built and developed by a PHP and JavaScript programming language with support from MySQL database to save the data, an HTML and CSS for the user's interface, and interaction with the system. In creating the mobile application, a web-based system was converted into an android by using Android Studio. To make the dynamic and quality project, the researchers use sublime to create the project easily. The researchers use this software because it is open source and has a quality that makes the researchers at ease at doing the project.

The system administrator can access the UMDC M-Journal through a server installed inside the research office. The admin can upload the journal files to the server, and the user can access and download the journal file through smartphones.

### *Algorithms*

An algorithm is used to implement the objectives of the system. The researcher used the search algorithm, an algorithm that retrieves the information stored within some data structure. Searching also encompasses algorithms that query the data structure, such as the SQL SELECT command.

### *System Requirements*

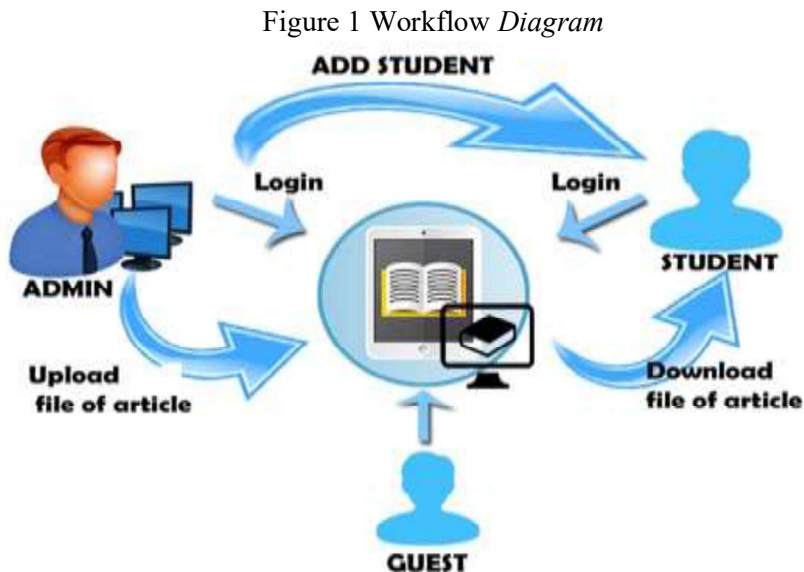
- DSL / Cable Internet connection, 4 Mbps download speed or higher is recommended.
- On PC or Mac, a modern web browser with JavaScript enabled:
  - Chrome (Preferred)
  - Safari (current, or the last two versions)

- Firefox (current, or the last two versions)
- Internet Explorer 9.0 (or higher)
- For Android (Droid) Devices: OS 3.0 (or higher)

### *Workflow Diagram*

A Workflow Diagram visually displays the movement and transfer of resources, documents, data, and tasks through the entire work process for a certain product or service. It is the flow of tasks or actions from one person or group to another.

The illustration above shows the functions and specific tasks intended for the admin, student, and guest. The admin will log-in; first, he/she can upload research articles and add students. If the admin is done with these processes, the student can log-in and has full access to the UMDC M-Journal. Thus, the student can search, view, comment, and download the research journals. However, the guest can view the research journals, but he/she can only view the abstract of the research journals.



## DESIGN AND METHODOLOGY

This chapter discusses the conceptual framework and the methodology used in this study. An Agile methodology is a particular approach to project management utilized in software development, and it uses incremental, iterative work sequences that are commonly known as sprints. The researchers chose the agile method because it is practiced in following this method. The Agile methodologies promote a project management process that encourages frequent inspection and adaptation. This leadership philosophy encourages teamwork, self-organization, and accountability. ASD is a set of engineering best practices (allowing for rapid delivery of high-quality software) and a business approach (aligning development with customer needs and goals).

**Figure 2** *Agile Development Life Cycle*



### *Functional Requir*

These are the software capabilities that must be present for the user to carry out the proposed system's services.

- Download files
- Search Files
- Upload Files
- Comment
- Count the number of downloads and views
- Bootstrap
- Notification

### *Non-functional Requirements*

Below are the non-functional requirements of the system. Non-functional requirements cover all the remaining requirements which are not covered by the

functional requirement. They specify criteria that judge the operation of the system.

#### *Security*

The system is locked using a username and password mechanism, and only designated people are allowed to access the system. The admin can only add files and students. The system is exclusive only to UMDC students and faculty for security purposes.

#### *Availability*

The system can be accessed anywhere as long as they have their smartphone and internet connection. They can download and install the application anytime.

#### *Usability and Compatibility*

The system can be accessed on the web and in a mobile application.

#### *Conceptual Framework*

Figure 3 Admin Conceptual Framework

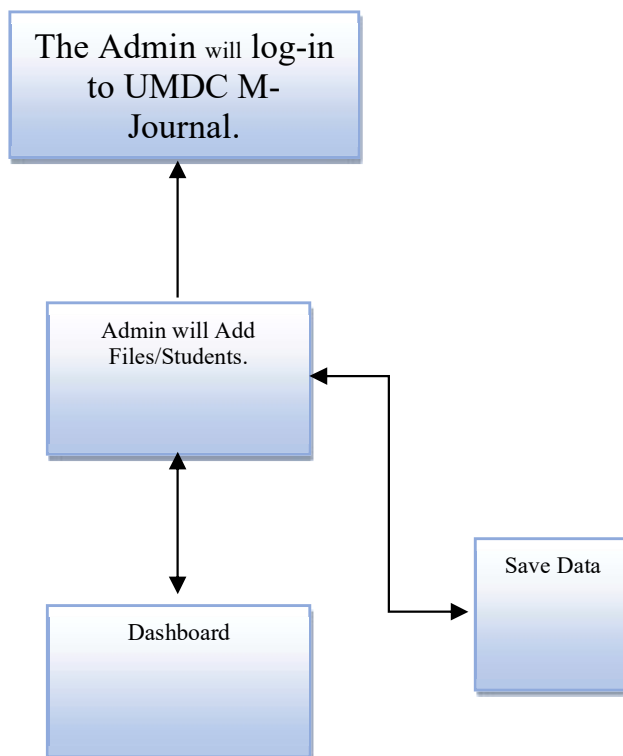
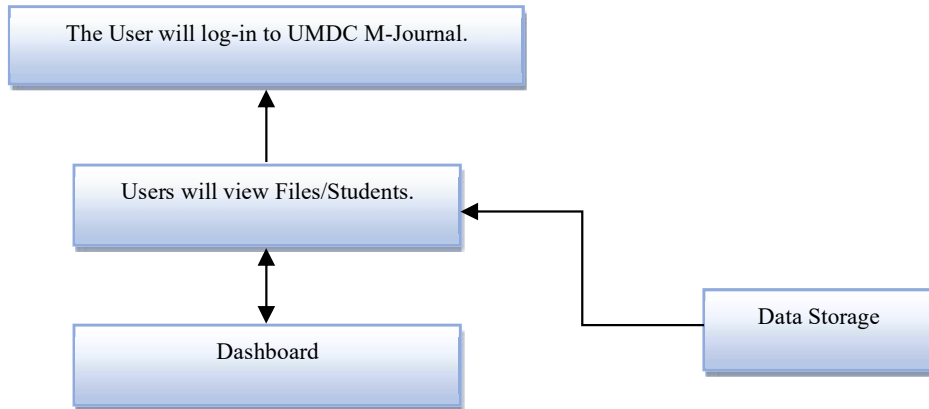


Figure 4 User Conceptual Framework



#### *Interface Requirements*

- Only the students and teachers of UMDC can account for the system to avoid any unauthorized user downloading the article.
- The guest can only view the abstract of the journal.
- Only the administrator can add students and journal files.

#### *Design of Software Systems*

The following contents define the design and function of the system. This includes the data flow of the proposed system.

#### *Input-Process-Output*

The Input Process Output or IPO model described how the user and the admin used the system. It described the structure of an information processing program or another process of the system.



Figure 5 Admin Input- Process- Output

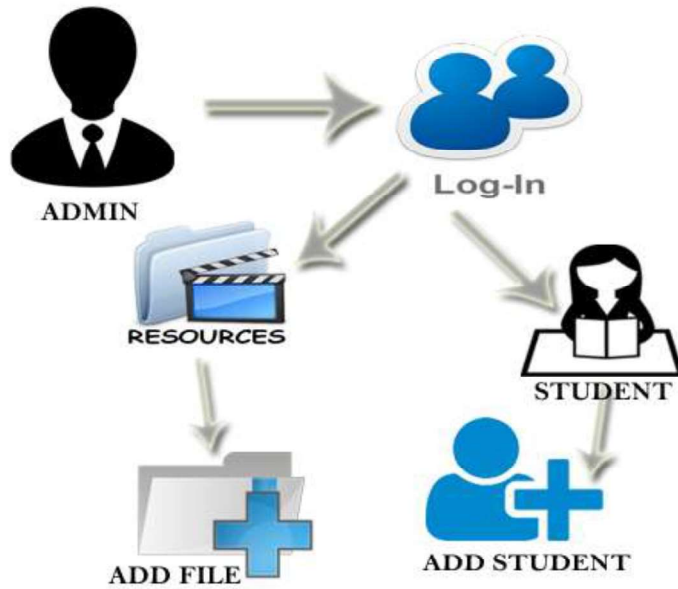
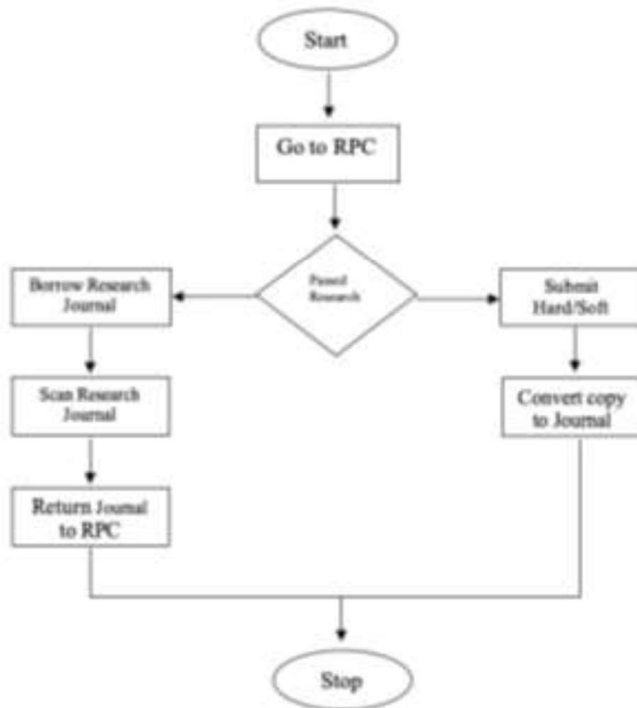


Figure 6 User Input- Process- Output



### Manual Flow Chart

Figure 7 Manual Flowchart



### Development and Testing

The researchers planned and decided to create a Mobile Journal for the Research and Publication Office, which can compile, search, and download research journals online to replace the manual process and eliminate certain problems experienced by the teachers and students. The researchers promote a project management process that encourages frequent inspection and adaptation. The researchers encourage teamwork, self-organization, and accountability through the successful development of the said system.

As the researchers are done with the proposed system, they have planned to conduct the created system testing.

**Testing:** The researchers plan to test their system by allowing them to use the mobile application by installing the APK. The purpose of the software testing is to detect the bugs and know how effective the proposed system is in the students and faculties.

## CONCLUSION AND RECOMMENDATION

This chapter presents the conclusion drawn based on the system's output, including the recommendation for future modifications to be done for this study.

### *Implementation Plan*

To use the proposed system correctly, the user must be computer literate and know how to use the web browsers. The user should be oriented on how the proposed information system works.

To implement the proposed system with the user, they must install the APK of the android application on their smartphones.

The system made by the researchers should be maintained for user usability and efficiency. If applicable, there should be a back-up server so that all data will be protected. Thus, research information is best assured from not losing it. The proponents also recommend that the IT Department assign IT personnel who will assist and mandate the research personnel for the system's excellent management.

### *Budget Recommendation*

The purpose of this is to view how much cost will be consumed by the time that the system will be implemented.

### *Hardware:*

Table 1 Particular Specification quantity cost/unit (PHP)

Minimum requirements	PRICE
Processor (AMD A4-5300)	2,500 Php-3,500 Php
2GB RAM DDR3	1,000 Php-1,500 Php
Monitor (1366x768 resolution)	4,500 Php-5,500 Php

Table 2 Recommended Budget for the Implementation of the System

Recommended	PRICE
Processor (4M Cache, 3.06 GHz)	5,000 Php-6,000 Php
4GB RAM DDR3	2,000 Php-2,500 Php
Monitor (1366x768 resolution)	4,500 Php-5,500 Php

## REFERENCES

- A. M. Marfal, "Up ahead: DOST's Super STAR BOOKS," Science and Technology Information Institute. [Online]. Available: <http://www.stii.dost.gov.ph/539-up-ahead-dost-s-super-starbooks>. [Accessed: 02-Feb-2017].
- J. A. Hyman, M. T. Moser, and L. N. Segala, "Electronic reading and digital library technologies: understanding learner expectation and usage intent for mobile learning," *Educ. Technol. Res. Dev.*, vol. 62, no. 1, pp. 35–52, Feb. 2014.
- Journals Online - Ateneo de Manila University. [Online]. Available: <http://journals.ateneo.edu/>. [Accessed: 14-Mar-2017].
- Philippine EJournals| Author. [Online]. Available: <http://ejournals.ph/about.php>. [Accessed: 14-Mar-2017].
- U.P. Diliman Journals Online. [Online]. Available: <http://journals.upd.edu.ph/>. [Accessed: 08-Feb-2017].
- UPLB, "University of The Philippines Los Baños Library." [Online]. Available: <https://library.uplb.edu.ph/history>. [Accessed: 02-Feb-2017].